

## **REMARKS**

The Office Action dated May 19, 2006, has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

Claims 13-25 are currently pending in the application, of which claims 13, 24, and 25 are independent claims. Claims 13-15, 19, and 22-24 have been amended, and claim 25 has been added, to more particularly point out and distinctly claim the invention. No new matter has been added. Claims 13-25 are respectfully submitted for consideration.

The specification was objected to because it is written in British English as opposed to American English, but correction was not required. Applicant respectfully declines the opportunity to make such changes to the specification, and it is respectfully requested that the objection be withdrawn.

The claims were objected to because they are written in British English and because claim 13 uses the word "they." The claims have been amended, and it is respectfully submitted that the amendments to the claims render this objection moot.

Claims 13-24 were rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,809,490 of Guiver et al. ("Guiver"). Applicant respectfully submits that the claims recite subject matter that is neither disclosed nor suggested in Guiver.

Claim 13, upon which claims 14-23 depend, is directed to a computer-implemented method. The method includes determining cluster centers in a first data

structure, wherein the first data structure comprises a lattice structure of weight vectors that create an approximate representation of a plurality of input data points. The method also includes performing a first iterative process for iteratively updating the weight vectors such that the weight vectors move toward the cluster centers. The method further includes performing a second iterative process for iteratively updating a second data structure utilizing results of the iterative updating of the first data structure. The method additionally includes determining, based on the second data structure, several sets of weight vectors in said lattice structure such that in each set, the weight vectors correspond to the same cluster centers of the input data points.

Claim 24 is directed to a computer-readable program product including a computer program code embodied on a computer-readable medium, wherein executing the computer program code in a computer causes the computer to carry out a process. The process includes determining cluster centers in a first data structure, wherein the first data structure comprises a lattice structure of weight vectors that create an approximate representation of a plurality of input data points. The process also includes performing a first iterative process for iteratively updating the weight vectors such that the weight vectors move toward the cluster centers. The process further includes performing a second iterative process for iteratively updating a second data structure utilizing results of the iterative updating of the first data structure. The process additionally includes determining, based on the second data structure, several sets of weight vectors in said

lattice structure such that in each set, the weight vectors correspond to the same cluster centers of the input data points.

Applicant respectfully submits that Guiver fails to disclose or suggest all of the elements of any of the presently pending claims.

Guiver generally relates to an apparatus and method for selecting a working data set for model development. Guiver, at column 9, lines 23-29, explains that the Guiver's routine updates weights of all neurons in the neighborhood of the winning neuron according to a learning rule set forth at lines 27 and 29 thereof.

Claims 13 and 24 recite "determining, based on the second data structure, several sets of weight vectors in said lattice structure such that in each set, the weight vectors correspond to the same cluster centers of the input data points." Applicant respectfully submits that Guiver fails to disclose or suggest at least this feature of the claimed invention.

The Office Action alleged that Guiver discloses this feature at column 9 lines 23-29. However, Guiver does not disclose this feature as presently amended. Claims 13 and 24 now recite, in part, "determining, based on the second data structure, several sets of weight vectors in said lattice structure such that in each set, the weight vectors correspond to the same cluster center."

Thus, according to claims 13 and 24, the second data structure is used to determine several sets of weight vectors in the lattice structure.

The passage of Guiver cited by the Office Action does not disclose that the second data structure is used to determine several sets of weight vectors in the lattice structure. This deficiency is apparent from the Office Action's discussion of the feature: "performing a second iterative process for iteratively updating a second data structure utilizing results of the iterative updating of the first data structure" as recited in claims 13 and 24.

The Office Action alleged that Guiver discloses "performing a second iterative process for iteratively updating a second data structure utilizing results of the iterative updating of the first data structure" at column 6, lines 11-17.

At column 6, lines 11-17, Guiver states that Guiver's invention "also contemplates that an iterative approach can be used to determine K. Using this approach, the clusterized data is used to create one analyzer or model while a sub-set of the data, preferably a subset with a new cut-off level K, is picked and used to create a second analyzer or model. This process can be performed in many iterations."

This passage of Guiver means that K is determined by a second iterative process (which Guiver calls an "iterative approach"), which creates a new subset of data. Thus, that the results of the second iterative process (which, according to the Office Action's analysis, correspond to the claimed second data structure) are not used to re-determine the lattice structure comprised in the first data structure.

Accordingly, rather than:

- begin with input data points which have a first data structure (a lattice of weight vectors);
- perform a first iterative process to update the weight vectors such that they move toward cluster centers (the two first steps can be performed in self-organizing maps (SOM), for example);
- perform a second iterative process to iteratively update a second data structure; and
- use the second data structure to re-determine the lattice structure comprised in the first data structure,

instead, Guiver describes:

- begin with input data points;
- perform a first iterative process to create a first SOM (a lattice structure);
- form a subset of the first SOM to create a second SOM (another lattice structure but not the same as the first); and
- perform a second iterative process on the second SOM.

Thus, Guiver fails to disclose that the second data structure is used to determine several sets of weight vectors in the lattice structure as particularly recited in claims 13 and 24. Indeed, Guiver fails to disclose the use of a second SOM (or any other second data structure) to determine several sets of weight vectors in the “original” lattice structure, which would be the first SOM in Guiver’s terminology, according to the Office Action’s own analysis.


Accordingly, it is respectfully submitted that Guiver fails to disclose or suggest all of the features of claims 13 and 24, and it is respectfully requested that the rejection of claims 13 and 24 be withdrawn. Claims 14-23 depend from claim 13 and recite additional limitations. It is, therefore, respectfully submitted that each of claims 14-23 recites subject matter that is neither disclosed nor suggested in Guiver. Thus, it is respectfully requested that the rejection of claims 24-23 be withdrawn.

For the reasons explained above, it is respectfully submitted that each of claims 13-25 recites subject matter that is neither disclosed nor suggested in the cited art. It is, therefore, respectfully requested that all of claims 13-25 be allowed, and that this application be passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, Applicant's undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, Applicant respectfully petitions for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,

  
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Enclosure: Additional Claim Transmittal